EWA Initial Gaming Scenarios

Presented at the Quinn/Spear meeting

March 22, 1999

CALFED BAY-DELTA PROGRAM

Environmental Water Account (EWA)

- Concept
  - Flexible management of water operations could achieve fishery and ecosystem benefits more efficiently than a completely prescriptive regulatory approach.
- Intent
  - To provide flexibility to achieve environmental benefits and to provide certainty (ESA and other regulatory assurances) to water users and continuous improvement to water supply reliability and water quality benefits.

CALFED BAY-DELTA PROGRAM

D-061067

Scenario 1A Assumptions

- All EWA storage is 50% full at the beginning of the game.
- EWA is funded at the initial level only (e.g.,$30 million)

CALFED BAY-DELTA PROGRAM

Scenario 1A Modeling Basis

- 1995 Level of Development
- Accord + VAMP
- All AFRP
- Trinity
- Interim South Delta Improvements (8.5 kcfs)
- Unlimited JPOD
- New in-Delta Storage (120 kaf)
- Gravelly Ford storage (100 kaf)
- Enlarged Shasta (145 kaf)

CALFED BAY-DELTA PROGRAM

Scenario 1A
Game Rules

- EWA has right to carry debt and to use Project facilities, provided it can assure no harm, unless arrangements for compensation are agreed to in advance. Can borrow against future water supplies, and shift project storage, provided it can make the Projects whole with high probability.
- Unless otherwise specified, EWA has low priority access to Project facilities
- EWA receives its annual income at the beginning of each water year. EWA may borrow up to one year of future income (e.g.,an additional $30M) at an interest rate of 8%.

CALFED BAY-DELTA PROGRAM

Scenario 1B
Assumptions

- All storage is 50% full at the beginning of the game.
- EWA is funded at the initial level only (e.g.,$20 million)

CALFED BAY-DELTA PROGRAM

D-061069

Scenario 1B Modeling Basis

- 1995 Level of Development
- Accord + VAMP - E/I
- Upstream AFRP
- Trinity
- Interim South Delta Improvements (8.5 kcfs)
- Unlimited JPOD
- Kern Water Bank (300 kaf)
- New in-Delta Storage (120 kaf)
- Gravelly Ford storage (100 kaf)
- Enlarged Shasta (145 kaf)

CALFED BAY DELTA PROGRAM

Scenario 1B Game Rules

- In general, the EWA will not carry debt because its benefits are based upon an annual call (which cannot be carried over from year to year) on Project operations. However, the EWA retains the right to purchase supplemental supplies and may use these supplies as collateral in asking for additional export reductions. The no harm rule applies.
- For EWA controlled water (as opposed to its rights against the Projects) EWA has low priority access to Project facilities.
- EWA receives its annual income at the beginning of each water year. EWA may borrow up to one year of future income (e.g., and additional $20) at an interest rate of 8%.

CALFED BAY-DELTA PROGRAM

Gaming Process

1. Historical October Hydrology is described
2. Historical November Salvage and data are described
3. Modify Biology/Salvage data to reflect changes in historical hydrology
4. Biology team identifies problems in adjusted modeled salvage data
5. Modeled hydrology is modified to fill EWA
6. Differences from historical hydrology to DWRSIM are described.

Gaming Process (con't)

7. Water is used to meet whichever tool is closest to target condition for target species
8. Assess water quality impacts of changes in hydrology.
9. Productivity changes are assessed for salmon, striped bass, delta smelt and splittail.
10. Entrainment effects on species are described.
11. Account for changes in assets of EWA

D-061071